

# ABSTRACT

A technique, for drawing power from the external signal circuit to power on-chip elements for an integrated circuit diode (ICD), utilizes an integrated diode and capacitor. The capacitor is charged by the external applied voltage during the time the ICD blocks the external current flow. The charged capacitor then acts as a battery to power the on-chip circuits to provide active control for the ICD function. This ICD could be provided as a two terminal discrete diode, or integrated onto a larger IC. This same technique can be utilized for a "self powered" MOSFET IC (ICM), utilizing a low power logic signal to trigger an internal circuit which would provide a much larger gate drive than the logic signal could provide. This could also be provided as discrete three terminal components, or integrated into a larger IC.